

ROCKS and MINERALS

PUBLISHED
MONTHLY



Edited and Published by
PETER ZODAC

July
1943

Contents for July, 1943

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ROCKS and MINERALS

PEEKSKILL, N. Y., U. S. A.

The official Journal of the Rocks and Minerals Association

Chips from the Quarry

A WELL-BALANCED MAGAZINE

In the last issue of ROCKS AND MINERALS, Mr. Wm. C. Chandler, of San Jose, Calif., offered a suggestion for increasing the subscription list of our magazine. We believe it was very favorably received by our readers as a number of new subscriptions — from unexpected quarters — have been received. The senders must surely have been influenced by Mr. Chandler.

In this issue another suggestion is given—one for improving ROCKS AND MINERALS. The author is Mr. Roy A. Redfield, of Spokane, Wash. The suggestion appears in the very last paragraph of his excellent "Mineral Papers", which is printed on another page. The last three sentences of this paragraph read: "In the meantime, as a step in the right direction, we suggest that ROCKS AND MINERALS put all the advertising first and foremost in the front of the magazine instead of at the tail end as at present. This would doubtless be appreciated by the readers, and it would come close to our idea of a well-balanced magazine. Let us have first things first."

Advertisements form one of the most attractive features of ROCKS AND MINERALS and we try to display them as prominently as possible. However the main purpose of ROCKS AND MINERALS is not to feature advertisements but to disseminate mineralogical information through its reading matter. Therefore we have and will continue to lay more stress upon the text of the magazine than upon the advertisements which appear in it. But we have not overlooked the advertising section from the readers angle. The *Index to Advertisers*, which has been

running regularly through many issues, was inaugurated to aid a reader in quickly spotting a dealer's advertisement. *With Our Dealers*, which likewise has been running for many months, calls attention to many advertisements in which some attractive offers are featured—this appears in the text. Both the *Index to Advertisers* and *With Our Dealers* are listed on the Contents Page. Do you know of any other magazine which gives its advertising pages so much publicity?



If our readers wish to have the advertisements appear in the front of the magazine this will be done. We must, however, receive quite a number of requests to have the change made otherwise we will assume that the present arrangement pleases the great majority of our readers.

Peter Zodac

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((The Official Journal
of the
ROCKS and MINERALS
ASSOCIATION))

Whole No. 144

THIRD ANNUAL EXHIBITION OF GEM STONES

BY
LOS ANGELES LAPIDARY SOCIETY

MAY 15, 16, 1943

At the Los Angeles Swimming Stadium Building
Exposition Park, Los Angeles, California

By LELANDE QUICK

One of the saddest moments of my life occurred when the lights were dimmed on the Third Annual Exhibition of Gem Stones by the Los Angeles Lapidary Society at nine o'clock on May 16th. This was the signal to "break it up" for the two-day exhibition was at an end. The seventy-two exhibits were all so beautiful that no true "rock-hound" could have other than lumps in a choking throat to see it all end. The great consolation we all had was the hope that better times were in the offing so that we could repeat the show next year as planned.

The attendance fell off somewhat over previous years because of an unfortunate circumstance: at the last minute the Army decided to prohibit parking within six blocks in all directions from the area where the exhibition was held. This meant that many people had to park and walk from distances as much as twenty blocks away or a couple of miles. Consequently, only true gem lovers attended, as was evidenced by the many intelligent questions asked of the exhibitors. Even so, 4,095 visitors were clocked and registered, which was an amazing showing considering gasoline rationing and other factors.

It was very evident to any discerning visitor at the three shows held in the last three years that all members displaying have graduated from rockhounds to artists. It is true that in such exhibitions junk is bound to creep in, but there was no really poor material exhibited and

much of it was superb. Truly, the Society is accomplishing the purpose of its existence, which is to revive the lost lapidary art and return it to the people.

On the second day of the show, the members themselves were asked to ballot on what they thought was the outstanding exhibit and a grand sweepstakes ribbon was awarded to C. E. Cramer, of Los Angeles. Mr. Cramer's exhibit included a building plot with a victory garden with vegetables actually growing in ordered rows. The lapidary shop in the back yard contained grinding and polishing equipment in miniature, actually working, with mannikin attendants. The shop and the house were made of a tasteful and appropriate assortment of petrified woods, and the doors swung on hinges. The table in the dining room was set for dinner. The dishes and meat and vegetables were of stones and no detail was missing in the perfect domestic scene. The old cat sleeping at the door, the pigeons with the eggs in the nest were made of gem materials, and the clothes line was of opalized wood. This exhibit also included "The Old Wood Pile" with a cord of wood made of varied petrified materials. The axe in the chopping block and the buck saw and the ground in the wood yard itself were all of petrified wood. An added decorative effect was a desert scene with desert plants in a sandy, mountainous setting. The tent with the cot prepared and the camp fire was there, and

—there was a good rock under every bush; a rockhound's dream. There was also a geode with a Rock Flea in the center. Once bitten, the victim is never cured. This was technically not a "gem" exhibit but it was felt by the members that such imagination was displayed, the public seemed to favor it, and all branches of the lapidary art with the exception of faceting had to be so skilfully accomplished, that it deserved the grand prize.

Runner-up for the grand award (with in four votes) was the magnificent display of flats and cabochons of Albert Hake, of Los Angeles. Mr. Hake had saved the oval indented tops of cocoa cans, covered them with blue material, and cut a great array of fine gem pieces all to the same size to fit them. This required all specimens to be about three by two inches and it is difficult to secure perfect gem materials that will produce gems that large. The theme of Mr. Hake's exhibit was blue. The exhibit also included the prize-winning group in the "flat" division, the second prize in the cabochon division, and a unique arrangement for displaying a large collection of iris agate and asteriated quartz. Pictures of the two exhibits mentioned above are presented on Page 197.

Seven members in the armed service were represented by the Society's Service Flag which was on display. Mrs. Herbert Monlux had made elaborate floral arrangements of dried weeds which appropriately added to the decor and gave it that nature touch in a dignified and restrained manner.

With 12,235 separate items displayed, it is indeed difficult to recall the outstanding ones but mention should be made of the following:

- Large map of the United States with a polished cabochon from every state in its proper place: Jane Hagar
- Assorted cabochons of pale blue opal in agate, and assorted lapis lazuli: Jane Hagar

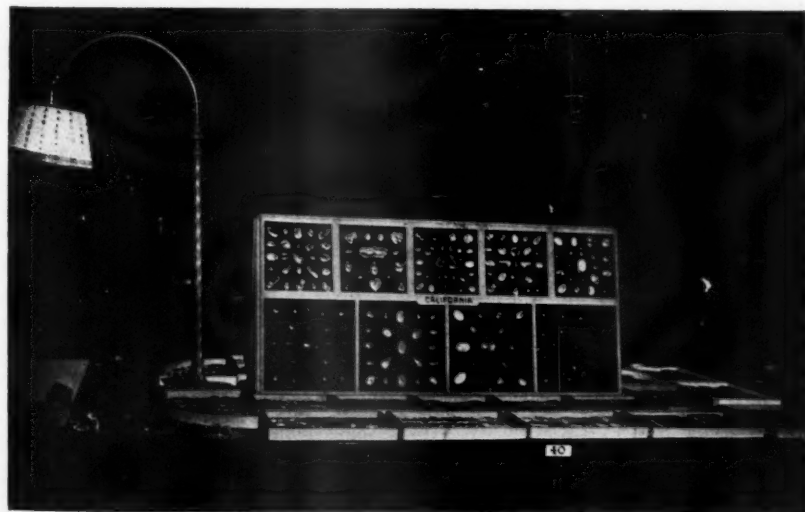
- Slabbed and polished opalized log from the Virgin Valley: Genn Harmas
- Large silver pendant of sea horses in filigree work holding a superb moonstone: Jessie Quane
- A fish cut from stone (variety of both unknown), complete in every detail: R. E. Willis
- Lighted geodes of Mr. and Mrs. J. S. Forbes
- Indian heads carved from howlite: Ray Kruger
- Large geode filled with native copper: S. P. Hansen
- Silver fan set with lapis lazuli, and bubble dancer in silver, set with moonstones: Susie Kieffer
- Large cabochon of pink tiger eye: Leland Quick
- Rooster, owl, and rabbit in silver by Jessie Quane
- Unique display of sagenite transparencies: DeWitte Hagar, President of the Society, and also a similar display by Frank Crawford

The Los Angeles Lapidary Society was organized in February, 1940, with 42 members. It now has a closed membership of 150, with a waiting list of 43. The membership was closed to prevent the organization from becoming unwieldy. It has magnificently accomplished its original purpose which was to improve the members in the lost art of cutting and polishing gem materials.

In normal times the Society conducts monthly field trips, some of several days' duration, for gem materials. Through compulsory exhibition it has kept the interest alive. The Society holds monthly dinner meetings at the Friday Morning Club in Los Angeles at which speakers on lapidary subjects offer lectures. Each month there is a swap table and material for sale by all members with 5% on sales going to the So-



The home and lapidary shop section, all made of gem materials, of the grand prize winning exhibition of C. E. Cramer, of Los Angeles.



Cases of cabochons of California materials. Part of the exhibit of Albert Hake, of Los Angeles, runner-up for the grand prize award.

ciety. Ten per cent of the membership has to exhibit at least five specimens of current work at each meeting, which compels every member's active interest to avoid the danger of being replaced by new members from the waiting list. Exhibition at the Society's annual show is optional but the by-laws are being revised to require a display to maintain active membership. The Society, recently incorporated, conducts its own library and publishes a paper for the members, entitled "Shop Notes".

The prize winners at the recent show on May 15 and 16 were:

CABOCHONS—ALL VARIETIES

- 1—Jane and DeWitte Hagar
- 2—Albert Hake
- 3—Harry Ringwald

FACETED WORK

- 1—Thomas Daniel
- 2—Harry Ringwald

PRACTICAL ARTS

- 1—Howard McCornack
- 2—Ben Maben

CABOCHONS—LADIES ONLY

- 1—Grace Peters
- 2—Mrs. Claude Rosenberg
- 3—Audra Ewing

MINERAL SPECIMENS (CRYSTALS)

- 1—Richard Mitchell
- 2—Harold Hueckel
- 3—Louis Goss

GEODES and FLATS—LADIES ONLY

- 1—Claire Schroeder
- 2—Katherine Goss
- 3—Pearl Robertson

JEWELRY CRAFT

- 1—Susie Kieffer
- 2—Jessie Quane



LELANDE QUICK

DeWITTE HAGAR

1st and 2nd Presidents of the Los Angeles Lapidary Society stand before the Society's service flag at the recent exhibition.

GEODES and NODULES

- 1—Ray Kruger
- 2—Melvin Gainer
- 3—S. P. Hansen

SLABS and FLATS

- 1—Albert Hake
- 2—C. E. Cramer
- 3—L. E. Lackie, Jr.

NOVELTIES

- 1—C. E. Cramer
- 2—Ray Kruger
- 3—Russell Grube and J. S. Forbes

SPECIAL TRAY AWARDS

Cabochons

- 1—Raymond Yale
- 2—L. B. Howell
- 3—D. H. Kirkpatrick

Faceting

- 1—Thomas Daniel

Jewelry

- 1—Jessie Quane
- 2—Mrs. Frank Crawford

Geodes

- 1—Fred Rugg
- 2—Katherine Goss
- 3—Harold Hueckel

Flats

- 1—C. R. Standridge
- 2—Belle Rugg
- 3—Melvin Gainer

Novelties

- 1—Howard McCornack
- 2—R. E. Willis
- 3—Ray Kruger

Practical Arts

- 1—J. S. Forbes
- 2—Mrs. J. S. Forbes
- 3—Herbert Monlux

SPECIAL AWARD RIBBONS TO

Mr. and Mrs. R. E. Willis
 Dr. Marsden Heard
 Archie Meiklejohn
 O. C. Smith
 Mr. and Mrs. Roy Cass
 Thomas Warren

PRECIOUS OPAL DISCOVERIES IN OREGON

Editor R & M:

Is this just a coincidence or not?

I read with much interest the March, 1943, issue of ROCKS AND MINERALS and noticed the passing of Mrs. Louhead. You did not mention the name of the cowboy who discovered the opal in Virgin Valley. I am making no claim at all but I was riding from the White Horse Ranch to the Blitzen Valley, (Harney County, Oregon) and on the way I picked up some pieces or fragments of clear sky-blue opal which I showed to Mr. Charles Haines and to Mr. Rhynaman at the Narrows, in Harney Valley, Oregon. Mr. Rhynaman was a gem cutter and he said that the opal was of good quality. This was in the year 1890.

I have never been back in that locality since and I am just wondering if the opal mines are in the same place where I found my specimen.

In the month of May, 1891, my brother George and I found another opal prospect over in the northwest end of Steens Mountains (Harney Co., Ore.) where we picked up a five pound salt sackful of the same kind of opal. There were lots of dark brown opal scattered around but we took only the clear ones. We couldn't find any sale for the opal so we never went back there any more.

In 1894 I found a prospect of fire opal occurring in thin seams in a gray sandstone that

was very similar to a common grindstone.

I also noticed a streak or seam of some kind of a black material but don't know what it was. It looked like slag from a furnace. This was in Grant County, Oregon, about 5 miles from Seneca. I was on a deer hunt and had no time to prospect. I don't think that either of these prospects have been rediscovered by anyone.

There is still another opal prospect near the town of Lona Creek, (north end of Grant Co., Ore.) where some very fine opal was obtained but this may have been worked out since. This was found on the Callen Ranch. In 1899 I saw a considerable quantity of this opal on display in Dr. Jack's drug store in Lona Creek. It was in the rough but was of a very fine quality—a rival of the best from Australia.

There seemed to have been no market at all for opal in those days.

Benj. L. Handley,
 May 1, 1943. Clio, Calif.

Who Else Is Pleased?

I enjoy ROCKS AND MINERALS very much and "How to collect minerals" has proven a treasured guide and inspiration to me.

George Pickett,
 Twin Falls, Idaho.

PEGMATITES

By DAVID M. SEAMAN

Carnegie Museum, Pittsburgh, Penna.

Definition

The granite pegmatites are the most common type of pegmatite. They are igneous dikes or veins essentially composed of the same minerals as are found in the igneous rock, granite. In the pegmatites the crystals and grains of these minerals; quartz, feldspar, mica, etc. have grown to much larger proportions; often the individual crystals attaining the size of several feet or more in some of the large bodies. The largest crystal in the world was found in pegmatite. It was a perthitic microcline crystal measuring 7x12x30 feet. It was mined on the farm Tveit, Iveland District north of Kristiansand, Norway. A book of biotite mica 6x9x2 feet was also found near Arendal, Norway. Other large crystals have been found, especially in the United States, as the enormous spodumene crystals in the Black Hills of South Dakota; the huge beryl crystals at Albany, Maine; a black tourmaline crystal 3x3x8 feet in the Luella Mine near Avon, Latah County, Idaho; and etc.

Origin

The crystals have reached their large sizes through very slow growth; crystallizing from high temperatures and cooling very slowly over very long periods of time. It has been estimated that it took ten million years to completely form the large 250 pound topaz crystal from Brazil in the Harvard University Museum. The pegmatites are thought to have been formed deep within the earth, and they are only exposed at the surface of the earth today where the thick overburden of rocks has been removed by extensive and long periods of erosion. As the parent magma slowly cools, shrinkage cracks are thought to have been produced in which the still plastic hotter material near the center, which is often rich in the mineralizers fluorine, boron, lithium, phosphorus, and water has been intruded in the form of dikes or veins. These dikes or veins may cut through all types of rocks but are usually observed cutting

through granites, mica schists, quartz-monzonites, and sometimes gabbros as at some of the California localities. Often in the mica schists, the pegmatites have been intruded between the foliation of the schist as lens-shaped bodies, stringers, pinchings and swellings, and etc. Pegmatites are often ill defined and may take many forms as oval-shaped pipe-like bodies, sills, etc. They may split and combine again, may be nearly flat lying or nearly vertical, or in any position between horizontal and vertical. They may vary from a few inches thick to a hundred yards or more, though usually most pegmatites are under twenty feet in thickness.

Good Collecting Grounds

The pegmatites are the mineral collectors best hunting grounds, especially the lithia pegmatites which often contain a host of rare mineral species only found in this type of pegmatite. Over 250 species have been observed in pegmatites with more than 150 having been found in the United States. To the scientist, the pegmatites are particularly interesting for he wishes to study the occurrence, association, and origin of their minerals; or their paragenesis.

Commercial Minerals

Pegmatites are the source of a number of minerals which yield valuable commercial metals as tin from cassiterite, beryllium from beryl, niobium and tantalum from columbite and tantalite, and others. Masses of cassiterite up to 50 pounds in weight have been found at the Etta Mine near Keystone, South Dakota. Three inch masses of cassiterite have been obtained at Black Mountain, Rumford, Maine. However the cassiterite found in the United States has not been abundant enough to produce much tin. Columbite has been found in masses up to 600 pounds at the Etta Mine, and one crystal was obtained at the Peerless Mine nearby which weighed 200 pounds. Masses of columbite from 6 to 8 pounds

in weight have been found at Amelia, Virginia. Recently a 60 pound crystal of tantalite was recovered from the properties of Mr. Funk near Fox Park, Wyoming. The columbite, tantalite, and beryl have been worked commercially in the United States.

Still rarer elements are recovered from some of the minerals which occur in pegmatites as cerium, caesium, erbium, didymium, lanthanum, lithium, ytterbium, yttrium, thorium, scandium, zirconium from such minerals as fergusonite, pollucite, allanite, gadolinite, yttrialite, lepidolite, amblygonite, spodumene, monazite, cyrtolite, zircon and others. Most pegmatites are worked however for their feldspar used chiefly in the glass and pottery industries and mica used in the electrical industry. It is only an occasional pegmatite which has unusual concentrations of certain minerals which can be mined exclusively for them as the rare earth minerals which occurred at Barringer Hill, Texas. Most of the commercial minerals of the pegmatites are recovered as byproducts of feldspar and mica mining as are most of the gem stones secured from them.

Certain pegmatites have been mined principally for their lithium content as the spodumene-amblygonite pegmatites of the Black Hills of South Dakota. One mass of amblygonite was found and mined at the Bob Ingersoll Mine near Keystone, South Dakota, which yielded 900 tons of this mineral. Further mining did not reveal any more amblygonite at this mine. Amblygonite masses up to three feet across have also been noted at Tin Mountain, South Dakota, and one mass at Newry, Maine, weighed nearly 500 pounds. The lepidolite present in the pegmatite of the Harding Mine near Embudo, Taos County, New Mexico, has been mined and sent to Washington, Pennsylvania, for use in making opalescent glass and other glass ware.

Pollucite has also been recovered from some of the mines of the Black Hills of South Dakota. Masses of pollucite 6 feet across have been found at Tin Mountain. The Newry, Maine, locality was reopened in 1929 for pollucite but

did not yield any after a year of work. The pollucite that has been mined was secured for its caesium content.

A few pegmatites have been worked for their gem minerals alone as at Mt. Mica, Paris, Maine; Mt. Antero, Devils Head, Crystal Peak, and Crystal Park, Colorado; some of the mines in the Pala and Mesa Grande districts of California; and a few other places.

Pockets

The pockets or cavities which are often met with in pegmatites are the source of most of the gem minerals which are found in this type of rock. Rarely gem crystals of tourmaline, topaz, and other minerals have been observed frozen into the solid pegmatite. Dark blue indicolite tourmalines with gemmy portions have been found in the solid pegmatite at Portland, Connecticut. Some of the pockets found have been of very large sizes. A pocket at the Bennett Quarry, Buckfield, Maine, measured $3\frac{1}{2} \times 25 \times 3\frac{1}{2}$ feet. One at Greenwood, Maine, was $7 \times 10 \times 4$ feet. One of the pockets at Mt. Mica, Paris, Maine, had three connecting chambers and measured $12 \times 20 \times 7$ feet. In 1933 a pocket was discovered in the Fisher Quarry, Topsham, Maine, which was $4 \times 6 \times 6$ feet. Other large pockets have been noted in the lithia pegmatites of San Diego County, California. One very large pocket was discovered about 1905 at the gadolinite locality near Bluffton, Texas, which was large enough to hold a horse. About 1910 a pocket was found at Crystal Peak near Florissant, Colorado, which measured $15 \times 15 \times 6$ feet. A number of other large pockets have been opened at other localities in the United States.

Crystals of Pockets

The crystals observed in the pockets have for the most part grown from the walls towards the center and project into the interior open space, or else are found on the floors where they have been shaken loose from their points of attachment by the blasts of the quarry workers, earthquake shocks, frost action, etc. Often the crystals are found coated with clay which most probably has been formed by disintegration and chemical action of

later solutions acting upon the feldspars lining the pockets. The crystals of the pockets are generally much more transparent, clearer of flaws, and more perfectly crystallized than those found in solid pegmatite as they have had ideal conditions in which to grow. Sometimes the pocket minerals have been partially dissolved and etched by late solutions from the igneous magma acting upon them. The pocket at the Fisher Quarry, Topsham, Maine, contained gem quality topaz crystals most of which were deeply etched to a mass of points. The beryl of this pocket was also badly etched.

Occasionally the minerals of the pockets have grown to large sizes. A large compound green tourmaline crystal taken from Mt. Mica, Paris, Maine, measured $7 \times 15\frac{1}{2}$ inches and weighed $31\frac{1}{2}$ pounds. The largest, transparent, single, green, gem crystal of tourmaline taken from this location measured $21\frac{1}{2}$ inches in diameter and was 10 inches long. The pockets at Buckfield, Maine, have given up milky quartz crystals over three feet in length and weighing over 500 pounds. From the largest pocket found at Barringer Hill, Texas, a smoky quartz crystal was recovered about 1905 which weighs 600 pounds and measures $43 \times 28 \times 15$ inches. It is now in the University of Texas Collection at Austin, Texas. Other large crystals have been found in the pockets in the lithia pegmatites of California as gem kunzite crystals measuring up to $8 \times 12 \times 2$ inches or larger.

Large Crystals in Solid Pegmatite

Extremely large crystals of spodumene occur frozen in the pegmatite of the Etta Mine near Keystone, South Dakota. Huge crystals measuring from 3 to 6 feet in diameter and 46 feet in length have been mined. One 42-foot long crystal weighed 65 tons. Other large spodumene crystals occur at the Tin Mountain Spodumene Mine seven miles from Custer, South Dakota, up to 30 feet in length. In 1898 a beryl crystal 4 feet in diameter and 18 feet long was found at Mt. Apatite, Auburn, Maine. Another large beryl crystal was found in 1912 at the Scott Rose Quartz Mine near Custer,

South Dakota, which was about 3 feet in diameter and 20 feet in length. Other large beryls have been noted at Acworth, New Hampshire; Royalston, Massachusetts, etc., while the most notable occurrence and concentration of beryl in this country is in the Bumpus Quarry at Albany, Maine. Here enormous large log-like crystals have been exposed by the quarry operations. The largest crystal is about 4×18 feet and its estimated weight has been placed at 18 tons. The beryls of this quarry are seen to radiate outwards from several common centers much like the spodumene crystals of the Black Hills. About ten large beryls were exposed in this quarry in 1930. At that time some 100 tons of beryl was observed on the dumps and in the quarry walls with perhaps as much beryl not yet exposed by the quarry operations. Other large crystals have been found in Maine at Newry as spodumene crystals 2 to 6 feet long and bicolored pink and green tourmalines not of gem quality, 3 inches in diameter and a foot or more in length. Recently in 1941 Philip Morrill found large crystals and chunks of chrysoberyl, itself a rare mineral, at Paris, Maine. One large termination of a crystal weighs $31\frac{1}{2}$ pounds and is in the collection of Mr. Marble. About 20 pounds of this mineral was recovered. The $31\frac{1}{2}$ pound termination is a part of a crystal which originally weighed probably about 10 pounds and is no doubt the largest reported crystal of this mineral in the world; the next largest crystal that from near Golden, Colorado, weighing $2\frac{1}{2}$ pounds. Other smaller crystals were found by Mr. Morrill up to $1\frac{1}{2}$ inches at the Paris, Maine, locality. North Carolina has yielded large books of commercial grade mica. One crystal of muscovite was taken in 1933 from the Spruce Pine Company's No. 10 Mine at Spruce Pine, North Carolina, 3×3 feet and 32 inches thick which weighed 4,320 pounds. Numerous other localities where large crystals of pegmatite minerals occur could be mentioned.

General Classification of Pegmatites

A general classification of pegmatites may be made based upon their mineral

content; grading from common pegmatite with the usual minerals common to granite to the extreme phase of the lithia pegmatites with their characteristic lithium bearing minerals and host of rare accessory minerals. They are considered in the following order: common pegmatite, beryl pegmatite, topaz pegmatite, topaz-phenakite pegmatite, topaz-phenakite-amazonstone pegmatite, topaz-phenakite-bertrandite pegmatite, zircon pegmatite, rare earth pegmatite, and lithia pegmatite. Many other pegmatites have been noted in which very rare minerals occur as at Quincy, Massachusetts; Silver Hill near Spokane, Washington; St. Peters Dome, Colorado; and etc.

Common Pegmatite

Common pegmatite consists of microcline or orthoclase or both; quartz; muscovite or biotite mica or both with the biotite usually being much less abundant than the muscovite. Almandite garnet, beryl, black tourmaline, and apatite are often present as minor constituents; the feldspar, mica, and quartz making up 95 per cent or more of the pegmatite body. Uranium bearing minerals are occasionally observed in small amounts as uraninite and its alterations uranophane, autunite, gummite, clarkeite and torbernite. Hyalite opal is sometimes found as a coating along cracks and seams in the pegmatite. Rose quartz is occasionally present in huge masses of good color. Pyrite, pyrrhotite, magnetite, pyrolusite, and limonite are also commonly observed in small quantities and rarely bismuth, bismuthinite, and bismutite.

The quarries at Bedford, New York, are typical of this kind of pegmatite with muscovite, microcline, orthoclase, almandite, black tourmaline, beryl, masses of rose quartz occasionally present and a few rarer minerals as hyalite opal, cyrtolite, ilmenite, and bismuthinite. Other examples are numerous as the Scott Rose Quartz Quarry near Custer, South Dakota; localities near Paris and Albany, Maine; near Springfield, New Hampshire; near the Royal Gorge, Colorado; and elsewhere.

Beryl Pegmatite

A number of pegmatites have been found in which beryl is the most prominent and common mineral besides the usual feldspar and mica. These pegmatites are very close to common pegmatite but have much larger concentrations of beryl present. The locality at Albany, Maine, of the huge beryl crystals previously mentioned is the best example. At Mt. Antero, Colorado, a great many pegmatites have been noted containing opaque beryl crystals. A few pegmatites at this locality contain pockets in which beautiful gem aquamarine beryl crystals occur and for which this locality has been chiefly worked. On Crabtree Mountain near Spruce Pine, North Carolina, there is a pegmatite where small emerald beryl crystals have been found. The associated minerals are albite, almandite garnet, and black tourmaline. This is a very unusual occurrence of emerald beryls. Other beryl pegmatites have been noted at a number of localities in the United States principally in Maine, New Hampshire, Massachusetts, and Connecticut.

Topaz Pegmatite

A few topaz bearing pegmatites closely allied to common pegmatite have been found in the United States. They have been noted near Milan, Stark, and Springfield, New Hampshire; in the Tarryall Mountains north of Lake George, Colorado; on the slopes of Pike's Peak and in the vicinity of Colorado Springs, Colorado; and in very minor amount at the Shehan Quarry, Graniteville, Missouri; and elsewhere.

Topaz-Phenakite-Pegmatite

At South Baldface Mountain, North Chatham, New Hampshire, and at a number of localities in Colorado, the pegmatites carry colorless or bluish topaz crystals and phenakite crystals. Beryl is absent in these pegmatites or else is present as a very minor constituent. Localities at Mt. Antero, Devils Head, and others have been found in Colorado where this type occurs.

Topaz-Phenakite-Amazonstone Pegmatite

A number of pegmatites at Crystal Peak near Florissant, Crystal Park near

Manitou, and some other Colorado localities, characteristically carry microcline variety amazonstone crystals in addition to topaz and phenakite crystals.

Topaz-Phenakite-Bertrandite-Beryl Pegmatite

Several pegmatites have been found at Mt. Antero, Colorado, which carry besides topaz and phenakite crystals some partially etched beryl crystals, bertrandite crystals, and smoky quartz crystals. It is noted that the bertrandite seems to have been formed as a secondary mineral from the beryl. At this locality it is always found in association with these partially decomposed and etched beryl crystals.

Zircon Pegmatite

Pegmatites near Zirconia and Tuxedo, North Carolina, are unusual in their great concentration of zircon in pegmatite consisting mostly of partially decomposed orthoclase, microcline, muscovite, and quartz. The zircon crystals range up to $\frac{1}{2}$ inch in length. Decomposed titanite crystals, tiny albite crystals, tiny milky beryl crystals, small quartz crystals, and small epidote crystals have been found in association with the zircons near Zirconia as well as the rare mineral auelite. Zircon crystals up to $1\frac{1}{2}$ inches long have been obtained in the plowed fields around Statesville, North Carolina. They are presumably from decomposed pegmatites also.

Rare Earth Pegmatite

A most unusual pegmatite was found at Barringer Hill near Buffton, Llano County, Texas. This locality has been submerged by a recent power project. The locality was remarkable when in operation for the number and great concentration of the rare earth minerals which it yielded especially gadolinite, allanite, fergusonite, yttrialite, etc. Gadolinite was obtained in single masses weighing up to 200 pounds and a twin crystal was found which weighed 73 pounds. Allanite was recovered in masses up to 300 pounds, and fergusonite in crystals up to 5 pounds. Yttrialite was taken in large masses up to 18 pounds in weight as was also fluorite in masses up to 400 pounds. Thorogum-

mite was found in pieces weighing a pound. Orthoclase crystals were noted measuring over 5 feet in diameter. Large masses of cyrtolite crystals were also recovered. Other rare minerals found here were rowlandite, menaccanite, polycrase, and mackintoshite.

Lithia Pegmatite

The lithia pegmatites are the most important type of pegmatite to the scientist, mineral collector, and gem collector. A host of rare minerals is often present. They are noted for the gem minerals frequently encountered in pockets. This type of pegmatite is characterized by the number of lithium bearing minerals present as highly colored lithium tourmalines, lepidolite, spodumene, amblygonite, triphylite, lithiophilite, and others. Albite is usually the chief feldspar with minor amounts of orthoclase and microcline. Lepidolite is the most common mica and is often observed in large granular masses; large crystals being much rarer in occurrence.

Origin of Lithia Pegmatites

The lithia pegmatites are thought to have a somewhat different origin than the common pegmatites. In his study of the pegmatites of San Diego County, California, W. T. Schaller states that "The assemblage of lithium minerals with their well known non-lithium associates cleavelandite, albite, quartz crystals, muscovite, columbite, apatite, etc. are now believed not to have been original crystallizations from a magma, but to be the result of replacement of a pre-existing rock probably by hydrothermal solutions. The microcline in the graphic granite can be found in all stages of replacement by albite and in extreme cases even the quartz is replaced. Incompletely replaced residua of microcline-quartz-graphic granite are found also in all replaced parts of the dikes. The lithium mineral aggregates lie in the middle seam with graphic granite above, and banded albite-quartz rock below. These dikes were at one time solid graphic granite composed essentially of microcline and quartz from top to bottom and all the minerals now present-

albite, the micas, the garnets, the tourmalines, all the fluorine, phosphorus, water, and lithium bearing minerals were not original crystallizations from a magma but were introduced later and are the result of replacement processes."

At Newry, Maine, H. F. Fraser noted that "the unusual minerals are in the central zone of the pegmatite and that the grading is from graphic granite into the unusual minerals in the center. No banding was definitely observed as in the California pegmatites." K. K. Landes is of the opinion that "Most of the pockets of central Maine are secondary and are due to the dissolving activity on the part of ascending solutions rather than primary gas or contraction cavities in igneous magma." At the recently discovered pocket in the Fisher Quarry, Topsham, Maine, Dr. Charles Palache noted that "The pocket was almost in the center of a 40 foot dike. It was in association with the graphic granite of the dike. The cleavelandite of the pocket was attached to normal graphic granite carrying large garnets with the boundary between the cleavelandite and the graphic granite being sharply marked." It may be stated that at most localities where lithia pegmatites occur, that the lithium minerals are observed in a central zone in the pegmatite and are thought to have been produced by secondary processes.

Minerals of Lithia Pegmatites

A number of metallic minerals characteristically occur in lithia pegmatites as cassiterite, columbite, tantalite, and samarskite though all may not be present in the same dike. Pyrite also occurs commonly while molybdenite and pyrrhotite are less frequently observed. Other common metallic minerals which occur chiefly in the ore veins of metallic deposits as galena, sphalerite, chalcopyrite, bornite, etc. are quite rare in all types of pegmatites.

Among the more common minerals often or occasionally found in lithia pegmatites are beryl, spodumene, tourmaline, amblygonite, apatite, garnet, topaz, fluorite, monazite, cyrtolite, zircon, uraninite,

uranophane, torbernite, autunite, and clarkite. The rare beryllium minerals as beryllonite, phenakite, bertrandite, and herderite have been found chiefly in the lithia pegmatites of Maine. The phosphates graftonite, triphylite, lithiophilite, heterosite, sicklerite, and eosphorite have been noted chiefly in the lithia pegmatites of Maine, New Hampshire, and Connecticut. The graftonite has been found at Grafton and North Groton, New Hampshire; and at Greenwood, Maine. Localities in Maine, Connecticut, and California have yielded purple gem crystals of apatite. The very rare, transparent, lilac colored variety of spodumene, kunzite, has been obtained from the lithia pegmatites near Pala and Rincon, California. It has also been secured from Branchville, Haddam Neck, and Portland, Connecticut; and near Kings Mountain, North Carolina. The gem topaz found in the lithia pegmatites has been secured chiefly from Stoneham and Topsham, Maine; and from a number of localities in California as the Mountain Lily Mine near Aguanga, near Rincon, Mesa Grande, and near Warners Hot Springs. Most of the gem quality morganite beryl has come from Mesa Grande and Pala, California. Aquamarine and golden beryl have been obtained from many localities in Maine, Massachusetts, Connecticut, California, and other states. The localities for the gem tourmalines in the United States are well known to most collectors. •

Lithia pegmatites have been found in ten of the United States: Maine, New Hampshire, Massachusetts, Connecticut, North Carolina, Colorado, Wyoming, New Mexico, South Dakota, and California. A list of the principal localities in these states will be given at the end of this paper.

Rare Pegmatite Localities

It may be interesting to call attention to a few pegmatite localities where a number of rare species of minerals have been found in order to show the great diversity of minerals which may occur in the pegmatites. In the St. Peters Dome Region near Colorado Springs, Colorado, pegmatites have been found which have

yielded very rare minerals as prosopite, pachnolite, gearsutite, tysonite, astrophyllite, danalite, elpasolite, thomsonolite, bastnasite, arfvedsonite, and fayalite. Silver Hill near Spokane, Washington, is another interesting locality. Here sillimanite, andalusite, scheelite, wolframite, and augite have been found in pegmatite. The lithia pegmatites at Ohio City, Colorado, are interesting because much massive topaz is present as well as rough opaque topaz crystals up to a foot long. Pink beryl crystals have also been found here though not of gem quality. Opaque rubellite tourmalines from this locality show bending without having been broken which is rather unusual as most tourmalines that show distortion have been broken and healed between the broken sections by quartz. The Fallon and Ballon quarries at North Common Hill, Quincy, Massachusetts, have yielded a number of rare minerals as aegerite, parisite, riebeckite, and octahedrite besides the more common fluorite, ilmenite, and zircon.

Pegmatites which cut across limestone or dolomite formations often develop some unusual minerals. The Frost Quarry near Davis, Howard County, Maryland, is an example. The diopside crystals which occur in this quarry are its most unusual mineral as crystals have been obtained up to 6x18 inches. Other minerals found here are microcline crystals up to 3 feet, hornblende crystals up to one inch, quartz, clinozoisite, phlogopite, pyrrhotite, garnet crystals, titanite crystals, and apatite crystals.

The feldspar deposit near DeKalb Junction, New York, is in pegmatite cutting limestone and some interesting minerals have been found here also. Among them are tremolite crystals, titanite crystals, diopside crystals, phlogopite crystals, serpentine, talc, pyrite, rutile, allanite, albite, danburite, and uraninite crystals some altered to thucholite. Many other localities could be mentioned where unusual pegmatite minerals occur.

Principal lithia pegmatite localities in the United States:

Maine

- 1 Harndon Hill, Stoneham
- 2 Mt. Rubellite, Hebron
- 3 Mt. Mica, Paris
- 4 Newry Mine, Newry
- 5 Berry Quarry, Poland
- 6 Black Mountain, Rumford
- 7 Harvard Quarry, Greenwood
- 8 Howard Quarry, Greenwood
- 9 Bennett Quarry, Buckfield
- 10 Mt. Apatite, Auburn
- 11 Fisher Quarry, Topsham
- 12 Hedgehog Hill, Peru
- 13 Vicinity of Norway

New Hampshire

- 1 Buzzo Quarry, Center Strafford
- 2 Ruggles Quarry, Grafton
- 3 Palermo Quarry, North Groton
- 4 Smith Mine, Alexandria
- 5 Vicinity of Gilsum
- 6 Turner Mine, Marlow
- 7 Vicinity of Alstead
- 8 Rice Quarry, North Groton

Massachusetts

- 1 Leominster
- 2 Norwich
- 3 Chesterfield
- 4 Lithia
- 5 Goshen
- 6 Sterling

Connecticut

- 1 Branchville
- 2 Gillette Quarry, Haddam Neck
- 3 Schoonmaker Mine, Portland
- 4 Strickland Quarry, Portland
- 5 White Rocks Quarry, Middletown

North Carolina

- 1 Ware Farm 2½ miles S.W. of Kings Mountain and vicinity

New Mexico

- 1 Harding Mine District 16 miles S.W. of Taos near Embudo, Taos County
- 2 Petaca District, Rio Arriba County

Wyoming

- 1 Fifteen miles N.E. of Shoshoni and 20 miles S.E. of Thermopolis, Bridger Mountains, Fremont County
- 2 Snowy Range, Albany County, properties of J. L. Funk, 6 miles from Fox Park

South Dakota

- 1 Bob Ingersoll Mine, Keystone
- 2 Peerless Mine, Keystone
- 3 Etta Mine, Keystone
- 4 Hugo Mine, Keystone
- 5 Big Tom Mine, 5 miles S. of Custer
- 6 Tin Mountain, 7 miles W. of Custer

Colorado

- 1 Ohio City near Pitkin
- 2 Four miles N. W. of Canyon City

California

- 1 Little Three Mine, Ramona
- 2 Surprise Mine, Ramona
- 3 Himalaya Mine, Mesa Grande
- 4 Pala Chief Mine, Pala
- 5 Salmons Kunzite Mine, Pala

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PANTELLERIA ISLAND

Pantelleria, whose ancient name was Cossyra, is an island in the Mediterranean Sea belonging to Italy. It is 8 miles long, 4 miles wide, and its area is 32 sq. miles. It is 60 miles southwest of Sicily and 40 miles northeast from the African coast. Population about 12,000.

The chief village (Pantelleria) lies on the northwest side of the island on the only harbor which is shallow and approached by a narrow channel.

Many centuries ago the island was used by the Roman emperors as a place of banishment for royal offenders. The island has also been used as a penal colony by Italy, although in recent years it has been so heavily fortified as to earn the distinction of being Italy's "Gibraltar". Pantelleria was captured by the Allied air force in the morning of Friday, June 11, 1943.

Geology

The island is entirely of volcanic or-

igin. Its highest point, Monte Grande, an extinct volcanic crater 2,740 ft. above the sea, is almost in the center of the island, more to the southeast. At the northern base of the crater is an alkaline lake. There are numerous fumaroles which emit steam and hot mineral springs which still afford evidence of volcanic activity. The rocks occurring on the island are liparyte (rhyolite lava), obsidian, etc.; also pantellerite, a variety of liparyte, which is distinguished by the presence of anorthoclase, with aegirine-augite, and cossyrite.

Mineralogy

Pantelleria is not noted for minerals though a few are known to occur. The most prominent is cossyrite (a variety of aenigmatite) which occurs in minute black crystals embedded in the liparyte lavas of the island. Cossyrite was named in honor of the ancient name of the island, Cossyra. Other minerals known to occur are aegirine, anorthoclase, augite, fayalite, and orthoclase.

MINERAL PAPERS

By ROY A. REDFIELD

"Mineral Supply House," Spokane, Wash.

4. Memberships and Subscriptions.

Henry was an oddity. He didn't want property of any kind because he thought that getting possessions took his mind off his business. That business was self-improvement. He wasn't interested in other people, not much at any rate; he was interested in cultivating Henry. Being something of a hermit by nature, he borrowed an axe—of course he didn't own one—and built himself a cabin in the woods, by the shore of a little lake. There for a couple of years he lived alone, and spent his time reading and making accurate observations of the wild life about him. He was a keen naturalist. The record of what he saw and did in that place has literary charm, and still enjoys considerable vogue after a hundred years. The book is *Walden*, by Henry Thoreau—you have read it?

As a nature student and writer, the man is entitled to his fame; but as a philosopher—well, that is another matter. What kind of world should we have if all the people eager for learning thought they must renounce every claim of human relationship and live exclusively for the purpose of self-culture? A man should be something more than a scholar. He should be ready to contribute something to the general human life about him. And lest this paper might seem to be running into platitudes and generalities, let us jump at once to a practical application—

Don't let your mineral hobby turn you into a freak!

No offense, we hope. The warning is not too far-fetched, really. Any kind of nature study can become a solitary pursuit, leading one away from healthy human interests. It is better to have someone pound you on the back and call you by your first name, than it would be to know all the secrets of the mineral kingdom. Agreed?—then you are still safe.

But if you doubt the proposition you are a mental case already. Either reaction should lead you to join a mineral society.

There can be no objection, certainly, to likemindedness. Your friendships will be no less beneficial because your associates have a yen for minerals, just as you do. We have it on the authority of this magazine and other important publications that mineral collectors are a rather choice sort of people. They can do you good. Walking in step with them is an acknowledgment that you are first of all a warm human being, with a capacity for giving as well as getting. In their company you will at times be bored and at other times thrilled; you will be amused and disgusted and stimulated and cheered. You will have all the common human reactions. By mixing a strong flavor of people into your mineral interest you will make it more permanent and satisfying. At the same time you will be exploring a new set of friendships, and among these you will find some that would rank Grade A in any collection, pure as alabaster, firm and lasting as hematite.

Consider this, from the profit standpoint only. Each of the persons in the club has some information and some misinformation; by pooling resources the information is shared, the misinformation corrected. If a new locality is found the news is generally announced. The group makes an audience worth the time of an expert, who will lecture to them although he wouldn't go to the trouble of advising you alone. There is also the pleasure of examining and comparing specimens; you will see many more types of minerals if you sit in with other people who collect. You will take part in arguments, and that is always worth while—what is life without an argument? Long after you have talked the

others down you may learn that you were quite wrong, but it is a great satisfaction to have carried one's point. Finally, there is this: a club has great staying power. It makes a common reservoir of perseverance for all its members, and keeps them warmed up and active when lassitude might pinch off the interest of a person going alone.

The wide popularity of such clubs and their continuance go to show that they have something to offer. The mineral hobby created the clubs in the first place (just as the hen preceded the egg—or was it vice versa?) and thereafter the clubs vastly extended and propagated the hobby. Without the clubs, mineral study would go back to the professors and a few scattered laymen. With the backing of the clubs it continues to be a popular field. They advertise its merits, showing that it is readily accessible, not expensive to pursue, interesting; and they demonstrate how it combines the pleasure of a ramble over the hills with the lure of a possible find. It required organization to publicize these charms.

Yes, we can truthfully praise the clubs; and with equal truth we can say some pleasant things about the mineral magazines. Those that are put out for the amateur mineralogist are first of all inspirational, they have value as sustaining an interest. As educators, they are even better than the clubs because they can generally get better talent and reach bigger audiences. Their best service of all is in keeping the faithful posted about what is going on. If a new min-

eral species is discovered—rare event!—you want to know about it. If a noted collection is to be sold, or jade is found in Wyoming, or the Schortmanns are going to have an exhibition, or the dinosaur has laid another egg in Thibet, these are things that ought to be told, and who shall proclaim them if not the mineral magazine? As well think of going through life without reading a newspaper as to be a mineral hobbyist without the means of keeping up to date.

And here we come to speak of dealer advertising in the periodicals, though the matter must be approached with great circumspection, since the editorial blue pencil is always poised. The editorial department is prone to regard advertising as a necessary evil, tolerated for the sake of revenue, but the dealers well know how subscribers eagerly scan the advertisements first of all, to see what rare offers are listed on the part of dealers who are practically giving their treasures away. Some day there may be a magazine run by the dealers, featuring advertisements mainly, and charging all editors and authors with the space they use at so much a word. Maybe that wouldn't be putting them in their place! In the meantime, as a step in the right direction, we suggest that ROCKS AND MINERALS put all the advertising first and foremost, in the front of the magazine instead of at the tail end as at present. This would doubtless be appreciated by the readers, and it would come close to our idea of a well-balanced magazine. Let us have first things first.

DID YOU SPOT THIS?

In the June issue of ROCKS AND MINERALS a glaring error appeared on one page of the reading matter. We wonder how many of our sharp-eyed readers spotted it! Those who have, why not drop us a line—a post card will do—as we would be interested in learning how many caught the error.

In the August issue we will comment on the number of replies received and will of course point out the error.

Fetid Quartz at S. Dover, N. Y.

Some interesting specimens of fetid quartz (stinkstone) has been found recently at the abandoned marble quarry in South Dover, N. Y. The quartz is milky white in color, massive, and when struck with a hammer gives off an odor resembling rotten cabbage.

Buy War Bonds and Stamps

Clubs Affiliated With the Rocks and Minerals Association

ARIZONA

Mineralogical Society of Arizona

Geo. G. McKhann, Sec., 909 E. Willetta Street, Phoenix.

Meets at the Arizona Museum in Phoenix on the 1st and 3rd Thursday of each month.

CALIFORNIA

East Bay Mineral Society

Miss Nathalie Forsythe, Sec., 1719 Allston Way, Berkeley.

Meets on the 1st and 3rd Thursdays of each month (except July and August), at 8:00 p.m., in the Lincoln School Auditorium, 11th and Jackson Sts., Oakland.

Northern California Mineral Society, Inc.

Mrs. Bernice V. Smith, Sec., 1091 Bush St., San Francisco.

Meets on the 3rd Wednesday of the month at the Public Library, San Francisco, at 8:00 p.m.

Pacific Mineral Society

Margaret Cotton, Sec., 2129—9th Ave., Los Angeles.

Meets on the 2nd Friday of each month at 6:30 p.m., at the Hershey Arms Hotel, 2600 Wilshire Blvd., Los Angeles.

Southwest Mineralogists

Dorothy C. Craig, Corres. Sec., 4139 S. Van Ness Ave., Los Angeles.

Meets every Friday at 8:00 p.m., Harvard Playground, 6120 Denker Ave., Los Angeles.

COLORADO

Canon City Geology Club

F. C. Kessler, Sec., 1020 Macon Ave., Canon City.

Meets on the 1st and 2nd Saturdays of each month at 9:00 a.m. in the High School Building, Canon City.

CONNECTICUT

Bridgeport Mineral Club

Miss Georgianna Seward, Sec., 2859 Main St., Bridgeport.

Meets in the Bridgeport Public Library on the 3rd Monday of the month.

Mineralogical Club of Hartford

Miss Gladys L. Gage, Secretary, 239 Newbury St., Hartford.

Meets the 2nd Wednesday of each month, at 8:00 p.m., at 249 High St., Hartford.

New Haven Mineral Club

Mrs. Lillian M. Otersen, Sec., 16 Grove Place, West Haven.

Meets on the 2nd Monday of the month at the Y. W. C. A. on Howe St., New Haven.

IDAHO—OREGON

Snake River Gem Club

Frank S. Zimmerman, Sec., Payette, Idaho.

Meets alternately in Payette, Idaho, and Ontario, Oregon, (two small cities on the Snake River) on the 3rd Tuesday of every month.

ILLINOIS

Junior Mineral League

William Dacus, Sec., Morgan Park Junior College, 2153 W. 111th St., Chicago.

MAINE

Maine Mineralogical and Geological Society

Miss Jessie L. Beach, Sec., 6 Allen Avenue, Portland.

Meets last Friday of the month at 8 p.m., at the Northeastern Business College, 97 Danforth Street, Portland.

MASSACHUSETTS

Boston Mineral Club

Miss M. Gertrude Peet, Sec., 8 Willard St., Cambridge.

Meets on the 1st Tuesday of the month at 8:00 p.m., at the New England Museum of Natural History, 234 Berkeley St., Boston.

Connecticut Valley Mineral Club

Mary E. Flahive, Secretary, 96 South St., Florence

Meets on the 1st Tuesday of each month at 8 p.m. at various institutions in the Connecticut Valley.

MISSOURI

National Geologist Club

Mrs. D. P. Stockwell, Pres., Mt. Olympus, Kimmswick.

NEVADA

Reno Rocks and Minerals Study Club

Mrs. Rader L. Thompson, Sec., Box 349, Reno.

Meets on the 1st Wednesday of each month, at 7:30 p.m., at the Mackay School of Mines, Reno.

NEW JERSEY

Newark Mineralogical Society

Louis Reamer, Secretary, 336 Elizabeth St., Orange.

Meets on the 1st Sunday of the month at 3 p.m. at Junior Hall, corner Orange and North 6th Streets, Newark.

New Jersey Mineralogical Society

G. R. Stilwell, Sec., 1023 W. 5th St., Plainfield.

Meets on the 1st Tuesday of the month at 8 p.m. at the Plainfield Public Library.

NEW MEXICO

New Mexico Mineral Society

R. M. Burnet, Sec.-Treas., Carlsbad.

Society of Archaeology, History and Art
Carlsbad.

NEW YORK**Chislers, The**

Miss Evelyn Waite, Sponsor, 242 Scarsdale Road, Crestwood, Tuckahoe.

Queens Mineral Society

Mrs. Edward J. Marcin, Sec., 46-30—190th Street, Flushing.

Meets on the 1st Thursday of the month at 8 p.m. at 8501 -- 118th St., Richmond Hill.

PENNSYLVANIA**Thomas Rock and Mineral Club**

Mrs. W. Hersey Thomas, Pres., 145 East Gorgas Lane, Mt. Airy, Philadelphia.

Meets on the 3rd Friday of each month. at 8:00 p.m., at the home of its president. Mrs. Thomas.

VERMONT**Mineralogical Society of Springfield**

Victor T. Johnson, Sec., 11 Elm Terrace, Springfield.

Meets on the 3rd Wednesday of each month at 8:00 p.m. at the homes of members.

WISCONSIN**Wisconsin Geological Society**

Milwaukee Public Museum, Milwaukee, Wisc.

Meets on the 1st Monday of each month at 8:00 p.m., at the Public Museum in Milwaukee.

SOUTHERN CALIFORNIA LOCALITIES

By **JACK SCHWARTZ**

656 South Hendricks Ave., Los Angeles, Calif.

9. San Jacinto Mts.

A little over one hundred miles from the city of Los Angeles, in the County of Riverside, is the San Jacinto Mountains. Rearing its head majestically over the desert city of Palm Springs, the San Jacinto Mountains is to become a popular vacation resort, not only in winter but in summer too. People are gradually becoming aware of the beauty of this spot and one trip here brings longings for further jaunts to San Jacinto Mountains.

On the summit of the highway, the stately pine trees beckon to the mineral collector, indeed it is unique, for where could you vacation in style and collect good minerals besides?

The most abundant of crystallized minerals that the writer found here was garnet. Huge boulders were found, some covered with garnet crystals, while others had garnets in seams and cavities. On Thomas Mountain a garnet mine was explored, but other collectors had apparently cleaned out the good material. Many of the large garnet-covered boulders are hauled to Los Angeles and vicinity to beautify gardens.

A pegmatite dyke near Thomas Mountain was known to yield large crystals of

beautiful pink tourmaline. Quartz, muscovite, biotite, black tourmaline, and feldspar are also collected.

An old prospector showed us specimens of wolframite he had found. He also told us of much scheelite in the vicinity. However his 'nobby was gold collecting and we couldn't get much out of him.

Calcite and dolomite were found common in some spots by the writer.

An abandoned mine will yield much asbestos to the seeker. Magnetite, variety lodestone, is also taken here in large pieces.

According to Pabst (1938) corundum is also found here.

Literature.

Pabst, A. 1938. Minerals of Calif. Calif. Div. Mines Bul. 113.

Back Numbers of Rocks and Minerals.

50 all different . . . \$10.00

75 all different . . . 16.00

100 all different . . . 25.00

Rocks and Minerals

Peekskill, N. Y.

Club and Society Notes

New Jersey Mineralogical Society

The regular monthly meeting of the New Jersey Mineralogical Society was held Tuesday evening, June 2, 1943, in the Society's meeting room in the Plainfield Public Library. Thirty-two members and friends were present. Minerals from the famous Calvert collection belonging to Major Martin Ehrmann were on display and many of the members of the Society were fortunate enough to purchase some of these fine specimens.

The business meeting was called to order by President Joseph D'Agostino at 8:30. He gave a short resume of the Society's activities during the past year and asked for a general discussion and suggestions for improvements that might increase interest in our monthly meetings.

President D'Agostino suggested that the New Jersey Society sponsor a mineral show to be held in the near future in Radio City (New York City), at which time all the Societies in the East be invited to take part. Space for this show has been offered by Mr. Nelson Rockefeller.

Mr. A. Surina suggested that a set of models showing the various crystal structures be purchased by the Society for educational purposes. Motion was regularly made and passed that the Secretary be authorized to investigate the possibility of such a purchase.

Mr. Thomas Wright suggested that the Society insure its properties. This matter was referred to Committee.

President D'Agostino asked for an expression of opinion on the general policy of the Society selling and exchanging minerals at the monthly meetings. It was the unanimous opinion that this policy should be continued and that these activities be increased during these days of rationed travel.

Dr. P. Walther also suggested that the members of the Society should do more swapping. There was considerable discussion on this matter and everyone agreed that there should be a regular time allotted for such trade at the monthly meetings.

President D'Agostino then announced that there would be an election of officers for the coming year and relinquished the chair to Mr. Thomas Wright, who called for the report of the nominating committee. The nominating committee consisted of the following members: Mr. B. H. Marshall, Chairman; Mr. Thomas Wright, Mr. E. M. Wise, Mr. O. B. J. Fraser, Dr. A. C. Hawkins, and Mr. W. H. Savary. Mr. Marshall reported that it was the opinion of the committee that no major changes be made in the Society's officers and that the following names were offered in nomination:

For President, Mr. Joseph D'Agostino
Vice-President, Dr. A. B. Cummins
Vice-President, Dr. S. S. Cole
Secretary, Mr. G. R. Stilwell
Assistant Secretary, Miss H. Hageman
Treasurer, Miss E. Hensel
Librarian, Mr. J. M. DuPont
Curator, Mr. L. Morgan

Mr. Wright asked for other nominations. Motion that nominations be closed was regularly made and passed. Motion was made and passed that the recommendations of the Nominating Committee be accepted and that these officers be elected by the Secretary casting the ballot.

Following the election of officers a committee consisting of Miss Hageman, Miss Hensel, and Mr. Hall served refreshments which were enjoyed by all.

Meeting adjourned at 10:15.

Respectfully submitted,
G. R. Stilwell, Secretary.

Queens Mineral Society

A regular meeting of the Club was held on Thurs., June 3, 1943, at its headquarters in Richmond Hill, N. Y. The minutes are:

The Club has an exhibit of local minerals on display in the Richmond Hill Public Library.

The Club is considering the advisability of establishing a permanent loan collection of minerals for display at various institutions and museums.

After the business session was over, Dr. Otto Trautz addressed the Club on the geological aspects of his western trip, illustrated with excellent Kodachrome slides. Time prevented Dr. Trautz from finishing his talk—he will continue it at an early meeting.

Mrs. E. J. Marcin, Secretary.

Snake River Gem Club

The following are the new officers of the Club:

President—Mrs. Earle Coats
Vice-President—Mrs. E. E. Logan
Secretary-Treasurer—Frank S. Zimmerman

The Club now meets on the third Monday of each month alternating between Ontario, Oregon, Payette and Weiser, Idaho.

Frank S. Zimmerman, Secretary.

New York Mineralogical Club

American Museum of Natural History, New York, N. Y., Wednesday, May 19, 1943.

Convened: 8:05 P.M. Attendance: 53.

Mr. Sampter presented the annual report of the curator's committee and read a brief eulogy to the late Mr. Vlismas.

A letter from Mr. Grahle recommending suspension of the activities of the excursion committee was read.

Mr. Taylor read the treasurer's annual report.

A vote of thanks was extended to Mr. Taylor for his many years of service to the club as its treasurer.

Mr. Trainer then introduced Dr. R. B. Sosman whose subject was: "Some Minerals of Professional Interest to the Steel Maker". Dr. Sosman described the process of steel making from start to finish, illustrating his remarks with slides and pausing to mention the various natural and artificial minerals connected with the several stages of the process. Specimens of ores were exhibited and mention was made of Maghemite, the magnetic form of Fe_3O_4 . Dr. Sosman illustrated its magnetism with some of the powdered mineral sprinkled on a paper held over a magnet. Artificially maghemite may be obtained by heating lepidocrocite, whereas goethite yields ordinary non-magnetic hematite. Besides the ore, the other important minerals involved are coal, and limestone with manganese a necessary adjunct. Sulfides and phosphates (pyrite, marcasite, apatite, etc.) are important in that they must be nearly absent.

Mention was also made of fire clay linings for furnaces. These are used in the form of mullite. Blast furnace slags may contain anorthosite, gehlenite and larnite, while the

magnesia brick floor lining of open-hearth furnaces tends to produce forsterite and monicellite in that slag. The latter furnace is provided with a roof lining of cristobalite. The Bessemer converter with its silica lining may produce a slag containing large masses of fayalite.

Fluorite is added to open-hearth furnaces as a solvent for larnite which is formed in the slag and tends to coat the lime particles thus slowing down the reaction. The lining of these furnaces is usually repaired with chromite.

A rising vote of thanks was extended to the speaker.

The new officers were installed at the end of the meeting.

M. Allen Northup, Secretary.

Northern Ohio Guild (American Gem Society)

A regular session of the Guild was held on Tues., June 1, 1943, at Western Reserve University, Cleveland, Ohio. The program consisted of a lecture on synthetic stones by Dr. Donner of the University.

The new officers of the Guild are:

Richard Fraser, President
Lester Bonwell, Vice-President
Mrs. Nina Martin, Secretary
Myron Chard, Treasurer

With Our Dealers

Mineral Supply House, of Spokane, Wash., is offering this month another series of representative specimens at attractive prices. We won't describe them—nor even list them—so you better look their ad up.

Ward's Natural Science Est., Inc., of Rochester, N. Y., offer ten choice cabinet specimens this month at prices ranging from 35c up to \$9.00. You must order some of them before their supply is exhausted!

Ultra-Violet Products, Inc., of Los Angeles, Calif., have just issued another catalog covering their Mineralights. The catalog contains 16 pages with 16 illustrations of which 11 are in color. The Mineralight, one of the foremost ultra-violet lamps in the country and very popular with collectors, is widely used by miners and prospectors—it has located scheelite deposits worth over \$100,000,000. If you have not a Mineralight, by all means send for the beautiful catalog, pick out a lamp which appeals to you, and order it.

The American Mineral Exchange, of Houston, Texas, is in the market for many

minerals on an exchange basis. You may have many good duplicates which they can use.

The address of W. Scott Lewis, the popular dealer of Hollywood, Calif., has been increased by the addition of a zone number (28). His full address is now 2500 N. Beachwood Dr., Hollywood 28, Calif. Are you receiving his interesting *Bulletin*? If not, YOU are missing a lot of valuable information! Look his ad up!

Warner & Grieger, of Pasadena, Calif., also have a zone number (4). Their full address is now 405 Ninita Parkway, Pasadena 4, Calif. In this issue they are featuring some interesting books. They also desire to purchase a number of minerals in 100 lb. lots—can you supply one or more items? Of course you must read their ad to see what it is all about.

Hurrah! A. J. Alessi, of Lombard, Ill., has a few Estwing pick hammers on hand! Rush your order, however, as only FIVE are left! He has other good items, too.

R. & M. A. HONOR ROLL

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The following members of the Rocks and Minerals Association are in the armed service of our country. Of the 60 members listed, one is a girl, Miss Eleanor Wales of Auburndale, Mass. If any errors or omissions occur, please call them to our attention. We would also appreciate if members would notify us of their change in rank, etc., so that they may be properly listed.

Though some members are on foreign soil, the Association has suffered no casualties as far as is known.

Albanese, John S. (Navy), Newark, N. J.
 Axtell, R. J. (Col., Army), Indianapolis, Ind.
 Bagrowski, Benedict P. (Pvt., Army), Milwaukee, Wisc.
 Bingham, Wm. (Capt., Army), St. Paul, Minn.
 Birman, Joseph (Pvt., Army), Seekonk, Mass.
 Bondley, Charles J., Jr. (Lt. Col., Army),?
 Brixey, Austin Day, Jr. (Navy), New York, N. Y.
 Brown, J. Prescott (Maj., Army), Albany, N. Y.
 Campbell, Clyde (Pvt., Army), Harrison, Ohio
 Cilen, Anthony (Pvt., Army), Hawthorne, N. J.
 Cilen, Joseph (Pvt., Army), Hawthorne, N. J.
 Connor, J. H. (Navy), Atlanta, Ga.
 Crowley, Richard M. (Army), Philadelphia, Pa.
 Currier, Frederick, Jr. (Pvt., Army), Meredith, N. H.
 Ehrmann, M. L. (Maj., Army), New York, N. Y.
 Fine, Sidney A. (Corp., Army),?
 Gilchrist, J. R. (Lt., Navy), Nyack, N. Y.
 Glasser, Frank (Sgt., Army), Grav, Idaho
 Graham, D. P., Jr. (Pvt., Army), Silver Spring, Md.
 Grieger, John M. (Pvt., Army), Pasadena, Calif.
 Hatcher, J. S. (Brig Gen., Army), Falls Church, Va.
 Irvin, A. M. (Army), Dexter, Maine

Jelinek, Joseph K. (Pvt., Army), Pasadena, Calif.
 Jenni, Clarence M. (Maj., Army), Festus, Mo.
 Kerridge, P. M. (Lt., Navy), Washington, D. C.
 Kessler, Dr. Frank (Army), Peekskill, N. Y.
 Knox, Arthur S. (Army), W. Somerville, Mass.
 Knox, S. C. (Pvt., Army), Atlanta, Ga.
 Kobelt, Theodore W. (Army), Wallkill, N. Y.
 Komiakoff, Leo (Lt., Army), Poughkeepsie, N. Y.
 Livingston, John L. (Capt., Army), Elizabethtown, Ill.
 McFarling, W. L. (Pvt., Army), Lincoln, Nebr.
 McKinley, Wm. C. (Army), Peoria, Ill.
 Minor, W. C. (Army), Fruita, Colo.
 Mixon, Carol (Pvt., Army), Lawrence, Mass.
 Molnar, George (Sgt., Army), Perth Amboy, N. J.
 Newell, Jno. G. (Pvt., Army), Wilson, N. C.
 Pancoast, B. S. (Sgt., Army), Woodstown, N. J.
 Pearl, Richard M. (Corp., Army), Denver, Colo.
 Perkins, James M. (Pvt., Army), Bridgeport, Conn.
 Printz, W. Harold (Pvt., Army), Newport, Ore.
 Pugsley, Ken (Pvt., Army), Pawling, N. Y.
 Randolph, Jack H. (Sgt., Army),?
 Reynolds, Dr. A. H. (Army), New York, N. Y.
 Sawyer, John A. (Maj., Army), Manhattan, Kans.
 Shaub, B. M. (Maj., Army), Northampton, Mass.
 Shinkle, J. C. (Lt. Col., Army), Aberdeen, Md.
 Smith, T. L. H. (Pvt., Army), Danbury, Conn.
 Sober, Harry (Ens., Navy), Washington, D. C.
 Spawn, Willman (Pvt., Army), Washington, D. C.
 Stinger, Ed. (Army),?
 Straley, Arthur (Navy),?
 Tasman, H. G. (Navy), Nyack, N. Y.
 Thompson, Norman (Corp., Army), Chico, Calif.
 Wales, Miss Eleanor (Lt., WAACS), Auburndale, Mass.
 Watters, Lu (Navy), San Francisco, Calif.
 Weight, Harold O. (Sgt., Army),?
 Wildzunas, John (Corp., Army), Albany, N. Y.
 Yackel, M. P. (Navy), Claremont, Calif.
 Yedlin, Leo Neal (Army), Cedar Grove, Me.

Questions and Answers

Ques. "Can you tell me if one can get a check-list of minerals in a simple form so that one can check off the material in his collection for ready reference?" R. L., Orient, L. I., N. Y.

Ans. As far as we know a check-list of minerals has never been printed. The nearest thing to a check-list is the "Complete Mineral Catalog" that was published by the Foote Mineral Company, of Philadelphia, Penn., in 1909. Copies of this 320-page, cloth-covered catalog, might be obtained at 2nd-hand book stores.

Ques. "I have a very fine analcite specimen whose locality is given as Cyclopean Islands. Can you tell me where these islands are located?" R. N., Colorado Springs, Colo.

Ans. The Cyclopean Islands are off the east coast of Sicily, 7 miles north of the city of Catania. They consist of seven huge rock masses, about 1/2 mile from the shore. An article on the locality will appear in an early issue of ROCKS AND MINERALS—watch for it!

Ques. "Can you tell me if the Pyrrhotite mine on Anthony's Nose, near Peekskill, N. Y., is in operation? I know it had been abandoned for years but possibly it may have been reopened due to the war." A. G., Newburgh, N. Y.

Ans. The mine is still abandoned and may be for many years to come. In 1933 the Rocks and Minerals Association held an outing at the mine and a few days before it took place a small party of members graded the road leading to it, drained most of the water out of the lower tunnel, and dug a spring for drinking water. This has been the only activity at the mine for the past 25 years or more.

Ques. "I have heard that the famous Barringer Hill locality in Texas has been obliterated. Is this true?" J. T., Erie, Penn.

Ans. Yes, it is true. Barringer Hill is now submerged in Lake Buchanan, an artificial lake that was dammed up several years ago for a power project.

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